

**DAEWOO**  
ELECTRICALS



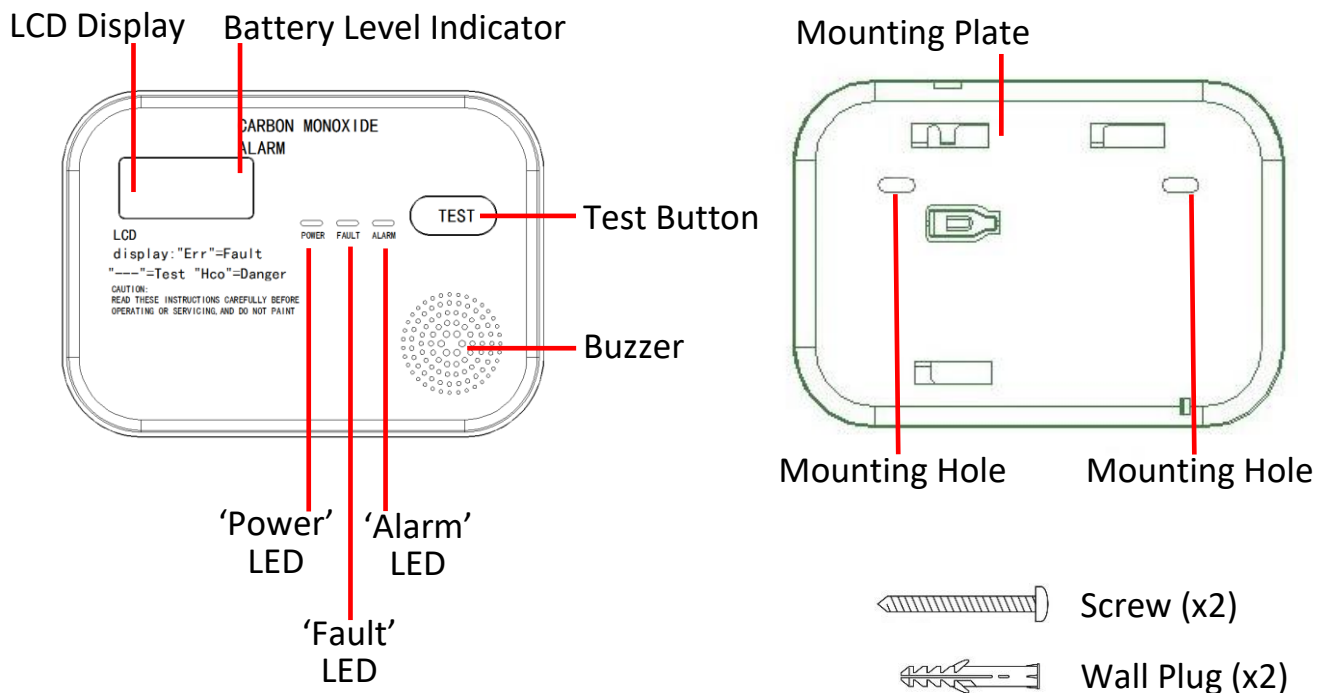
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## Carbon Monoxide Alarm

ELA1391

User Manual

**Description of Parts**




**IMPORTANT:**

Please read these instructions thoroughly before use and retain for future reference.

Please check that all parts are present (see *Description of Parts* above) and that the product is intact and not damaged.

**About Your Carbon Monoxide (CO) Alarm**



**WARNING! When the Detector sounds it indicates the presence of Carbon Monoxide (CO) which can kill.**

- This Carbon Monoxide (CO) Detector is for detecting CO build up in domestic households.

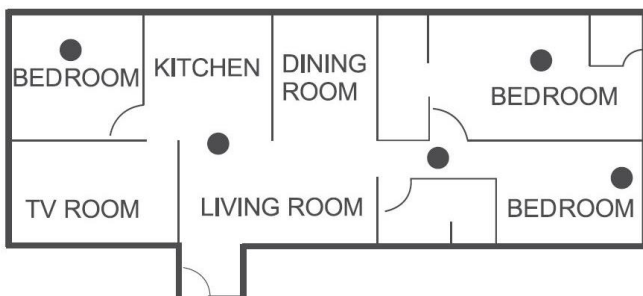
**About Carbon Monoxide (CO)**

- CO is invisible and cannot be seen, tasted or smelt and can also be fatal. CO builds up in the blood and is called the carboxyhemoglobin level which reduces the body's ability to supply oxygen to itself.
- Depending on the concentration, Carbon Monoxide can kill in minutes.

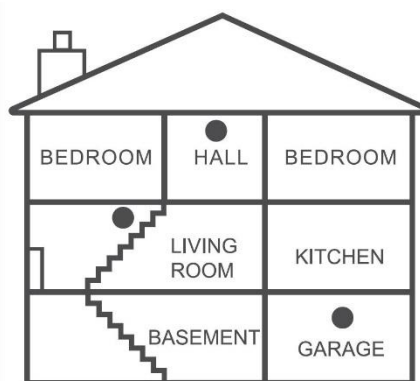
- **Common causes of CO are faulty gas boilers, gas fires (and fireplaces), gas cookers, etc. Other potential CO sources are Combustion Engines (Petrol or Diesel), Generators (electrical), blocked Chimneys, blocked Flues, Paraffin heaters, portable Gas Fires, Log or Coal Burning Stoves. Petrol or Diesel powered tools. Using a Gas or Charcoal Grill/Barbecue in an enclosed space.**
- **Indications of CO poisoning are symptoms similar to the flu, but with no fever. Other symptoms include dizziness, fatigue, weakness, headache, nausea, vomiting, sleepiness and confusion.**
- **Everyone is susceptible to the danger of CO, but unborn babies, small children, pregnant women, senior citizens and people with heart or respiratory problems may experience symptoms sooner.**
- **Anyone feeling unwell, even after being exposed to mild levels of Carbon Monoxide, should immediately seek medical attention.**
- **Symptoms of Carbon Monoxide exposure are:**
  - *Mild exposure – Headache, Dizziness, Nausea, Vomiting, fatigue (Flu like symptoms), Confusion, Transient Unconsciousness/Blackouts.*
  - *Moderate exposure – Severe Headache, Drowsiness, Cherry red Lips and Nails, coma can occur if exposure continues.*
  - *High Level exposure – Pale Complexion, Dilated Pupils, Unconsciousness, convulsions, Cardio-respiratory failure, Possible death.*
- **To reduce the risk of CO poisoning:**
  - *Gas appliances should be serviced annually by a qualified Gas Safe engineer.*
  - *Solid Fuel appliances (Wood, Coal burners, etc.) should be serviced by a HETAS registered engineer to inspect and clean your heating system, vents, chimneys and flues.*
- **This Carbon Monoxide Detector should be tested once a week without fail.**
- **This Carbon Monoxide Detector is to detect Carbon Monoxide (CO) gas only.**
- **It is NOT designed to detect smoke, fire, heat or other gases.**
- **This is NOT to be used as a substitute for a smoke or heat alarm.**

**Recommended Locations for the Carbon Monoxide Detectors**

- Ideally a Carbon Monoxide Detector should be installed in each room of the house.
- Install the Carbon Monoxide Detector in a room where the Burner/appliance is located e.g. near a fireplace or kitchen door.
- Whilst fitting the Carbon Monoxide Detector in the same room as a fuel burning appliance:
  - The horizontal distance between the Carbon Monoxide Detector and the fuel burning appliance should be between 1m – 3m.
  - If there is a partition wall in the room, the Carbon Monoxide Detector should be located on the same side as the fuel burning appliance.
  - DO NOT obstruct or block the detectors inlet(s) on the rear of the unit.
  - When the Carbon Monoxide Detector is mounted on the wall, ensure that it is mounted at a minimum of 2m from the floor.
- Carbon Monoxide Detectors are suitable for installing in Kitchens, Living rooms, Bedrooms, etc.
- Also suitable for Garages, Lofts, Boiler rooms, understairs space, store rooms, drying rooms.

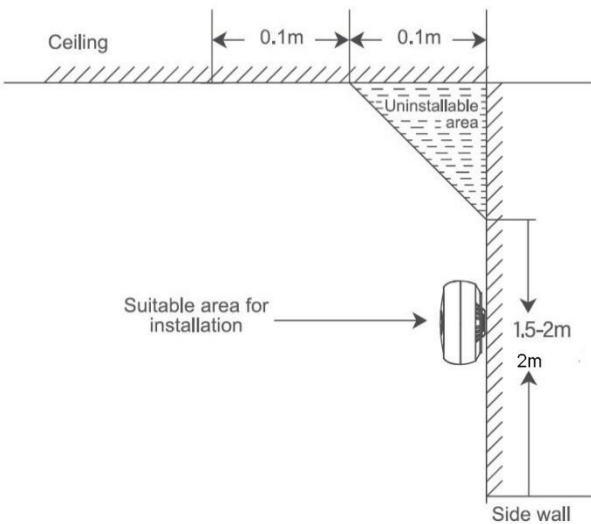


Position of Carbon Monoxide Detectors in a typical Bungalow.



● CO alarms for limited protection

Position of Carbon Monoxide Detectors in a typical House.



### **Mounting Your Carbon Monoxide Detector**

Once a suitable position has been identified, mark the fixing holes using the mounting plate as a guide. Drill two holes with a 6mm Masonry drill bit (not supplied).

Pass the screws through the mounting plate into the plugs and tighten with a suitable screwdriver (not supplied). Ensure that the mounting plate is mounted on the wall as shown below:



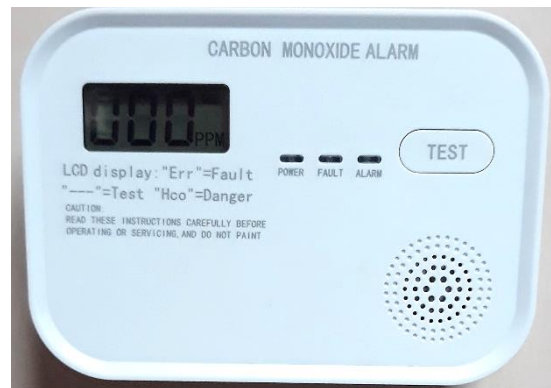
Above: The correct way up for the Mounting Bracket to be mounted on the wall.

**NB** The plug and screws supplied may not be suitable for the surface the detector is to be mounted onto, other plugs and screws maybe required.



Left: Before attaching the detector to the Mounting Bracket, insert 3x 1.5V AA Batteries in the battery compartment at the rear of the alarm being careful to observe the polarity markings. Note the levers inside the battery compartment must be pushed down first before inserting the batteries.

Below: Once the batteries are installed, the alarm will beep and the LCD Display will show '---'. Mount the alarm by sliding it on to the bracket from left to right:



Once the detector is mounted in place, press the test button to test it for functionality. The detector will beep to confirm it is working correctly.

**IF THE DETECTOR DOES NOT SOUND INVESTIGATE THE CAUSE IMMEDIATELY.**

***LED indicator Information***

<b>Information</b>	<b>Status</b>	<b>Function</b>
Power-up prompt	The Power indicator, Fault indicator and Alarm indicator will flash at the same time, and the buzzer sounds.	This indicates that the power supply is correctly connected. The indicator lights function and the buzzer sounds normally.
Normal operation	The Power indicator flashes at least once every minute.	The detector is in normal operation.
Low battery warning	The Fault indicator flashes with a beep at least once every minute.	The batteries need to be replaced.
Fault warning	The Fault indicator will flash twice with beeps. Fault warning will be given at least once every minute.	There is fault in the sensor or circuit. The fault warning will sound at least once every minute until fault is removed.
End-of-life warning	The Fault indicator will flash 3 times with beeps. The end-of-life warning will be given at least once every minute.	It indicates end of the life of the unit and will have to be replaced.
Alarm warning	The Alarm indicator flashes 5 times with beeps. That makes one cycle of alarm. Alarm warning will be made 3 times every 10 seconds.	The alarm has triggered and dangerous concentrations of CO has been detected.
Alarm silence	Once the alarm has triggered, press and hold the TEST button to silence the alarm. The Alarm indicator will still flash. Alarm silence condition lasts less than 10 minutes.	It indicates alarm condition without audible alarm, only when the CO concentration is less than <b>200PPM</b> . Above which the alarm will sound again.
Low CO concentration warning	The Alarm indicator will flash 4 times with beeps at a slower speed. Low CO concentration warning will be given at least once every five minutes and the interval will be at least 3 minutes.	It indicates low concentration of CO is detected.
Testing	Press the TEST button, and the Power, Fault and Alarm indicator will flash once at the same time. If the detector is working properly, then one cycle of alarm will be made. If there is malfunction, then fault warning will be made.	For manual testing.



**LCD Display Information**

**a. General**



Battery Level Indicator  
Carbon Monoxide Level (Example)

**b. Power Up Prompt**

After inserting the batteries, the LCD Display flash up the below indication and then return to the General Display as above.



**c. Battery Level Indicator**



Batteries New/Full



Batteries Normal



Batteries Low

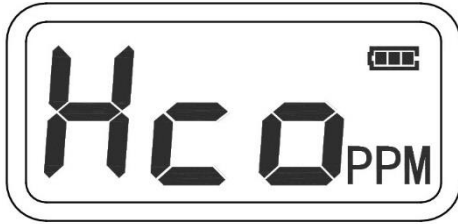


Batteries exhausted and one beep heard every minute. Batteries must be replaced immediately otherwise a safety hazard will exist.

**d. CO Concentration**

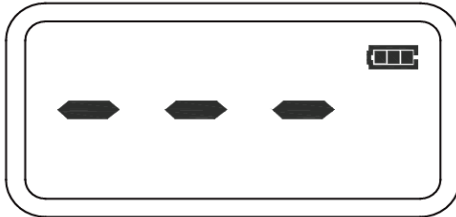


The LCD Display shows CO concentration in PPM, when CO concentration is less than 10PPM, the display shows 000 PPM.



If the CO concentration is more than 550PPM, the **LCD Display** shows “Hco” (High Carbon Monoxide) as the Alarm has detected dangerously high levels of carbon monoxide above 550PPM.

**e. Test Display**



Whilst pressing the **Test** button, the **LCD Display** will show three dashes, the **Alarm LED** will flash and the alarm will beep.

**f. Fault Warning**



This message on the **LCD Display** indicates a fault warning.

**g. End of Life Warning**



This message on the **LCD Display** indicates the end of life of the Carbon Monoxide Alarm which must then be replaced.

## **Alarm and LED Indicator Modes**

- **Power Up**  
The LCD Display will flash up 'EN' and the LED indicators will flash.
- **Normal Operating Mode**  
In normal operating mode, the **Power LED** indicator will flash **GREEN** once every 45 seconds. If very low level concentration of CO is detected but alarm has not been triggered, the interval will be a little less than 45 seconds.
- **Low Voltage Warning**  
When the batteries fall below 3.6V the low battery warning will sound once every minute.
- **Detector Fault**  
If there is a fault in the sensor circuit, a fault warning will be given within three minutes. The fault warning will sound once a minute until the fault is eliminated and the **LCD Display** will show 'Err'.
- **End of Life Warning**  
Once the detector has been working for about 10 years, the end-of-life warning will be given and the unit cannot be used any more and must be replaced. The **LCD Display** will show 'End' when end-of-unit-life warning is given.
- **Alarm Warning**  
Once the alarm is triggered, it will sound for three cycles of alarm and the **Alarm LED** will flash, the interval between each cycle will be less than 10 seconds. The alarm will terminate automatically in 6 minutes when the CO level is less than 40PPM.
- **Testing the Detector**  
Press the '**Test**' button to test the detector at least once a week to ensure the unit is working satisfactorily. The **LCD Display** will show '---'.  
**IF THE DETECTOR DOES NOT SOUND INVESTIGATE THE CAUSE IMMEDIATELY.**
- **Hush Function**  
Once the detector sounds, press the test button to silence the unit, however, if the Carbon Monoxide is still above the trigger point, the detector will sound again.

## **Care and Maintenance**

- Press the test button to test the Carbon Monoxide Detector at least once every week. **IF THE DETECTOR DOES NOT SOUND INVESTIGATE THE CAUSE IMMEDIATELY.**
- Clean the detector at least once a year using a vacuum cleaner to keep it clear of accumulated dust.
- **DO NOT** paint your detector, this may obstruct the inlet and prevent the detector from working normally.
- Clean outside of your detector with a clean damp cloth. Never clean with harsh or abrasive cleaners.
- **DO NOT** submerge the detector in water or any other liquids.

**Detector Response to PPM Concentration Levels**

<b>CO concentration</b>	<b>No alarm before</b>	<b>Alarm sounds before</b>
27±3 PPM	No Alarm	No Alarm
55±5 PPM	60 min	90 min
110±10 PPM	10 min	40 min
330±30 PPM	--	3 min

**Troubleshooting Guide**

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Solution</b>
Detector triggers continually	High concentration of Carbon Monoxide	Open all windows and doors, turn off appliances and have them checked immediately.
Detector beeps once every 60 seconds.	Low voltage/flat battery	Replace the Batteries
Detector beeps once every 60 seconds and the LCD Display shows 'Err'	Detector is faulty	Replace Detector

**Technical Specification**

ESG Model Number	ELA1391
Ningbo Kingdun Model Number	KD-218A
Operating Voltage	DC --- 6V
Battery Type	3x 1.5V AA
Product Life	10 Years
Detector Sound Level	>85dB@3m
Device Type	Type B
Detector type	Sounder, LED Indicator and LCD Display
Carbon Monoxide Alarm Level	27 – 55ppm 60-90 minutes
	110ppm 10-40 minutes
	330ppm <3 minutes
CO Sensor Type	CO Electrochemical Sensor
Operating Temperature Range	-10°C – 45°C
Dimensions (Approx.)	78mm (h) x 110mm (w) x 38mm (d)
Weight	115g
Tested to EN 50291-1:2018	

### Battery Warnings

- Do not mix old and new batteries together.
- It is recommended that batteries are removed from the alarm if it is not to be used for a long period of time.
- CAUTION: There is a danger of explosion if the batteries are incorrectly fitted.
- Replace only with the same or equivalent battery type.
- Do not expose the batteries to sunshine, fire, heat or similar.
- Do not dispose of batteries in a fire.

#### **WARNING**

- Do not ingest the batteries.
- Keep new and used batteries away from children and animals.
- If the battery compartment does not latch securely, stop using the product and keep it away from children.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
- If the batteries leak, remove them immediately to avoid damaging the product. Do not remove the batteries with your bare hands or allow the battery fluid to come into contact with your skin, eyes or mucous membranes. Wear normal household gloves to do so. If, however, your skin has come into contact with the battery fluid, wash your skin immediately, if necessary, seek medical attention.

## Recycling Information

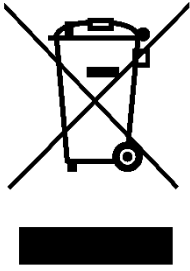
### Disposal of the Packaging

Dispose of paper and cardboard in appropriate paper re-cycling facilities.

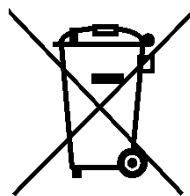
Dispose of recyclable plastics in appropriate plastic re-cycling facilities.

Dispose of non-recyclable plastics in the appropriate plastics collection service.

### Disposal of the Product



You should now recycle your waste electrical goods and in doing so help the environment. This symbol means waste electrical products at the end of their useful life should not be disposed of with normal household waste. Please ensure it is taken to a suitable facility for disposal. Check with your Local Authority or retailer for recycling advice or visit [www.recycle-more.co.uk](http://www.recycle-more.co.uk), enter your postcode to find out your nearest recycling site.



This symbol means batteries and rechargeable batteries may not be disposed of with household waste! As the end user you are required by law to bring all batteries and rechargeable batteries to a collection point run by the Local Authority or to a retailer, so that they can be disposed of in an environmentally friendly manner

## ***Customer Support***

*Should you require any product information, replacement parts or accessories, please contact our customer care team at [help@daewooelectricals.com](mailto:help@daewooelectricals.com) or call 0161 831 7879.*

- *Replacement parts and accessories are guaranteed for 1 year from the date of purchase.*
- *It is important to note that your warranty becomes invalid should non Daewoo parts or accessories be used with this appliance*

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1 Brightgate Way

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Produced by:

NINGBO KINGDUN ELECTRONIC INDUSTRY CO., LIMITED

No.28 Fengyuan Road, South of Economic Development Area, Yuyao City,  
Zhejiang, China.